Thesis/
Reports
Chavez,
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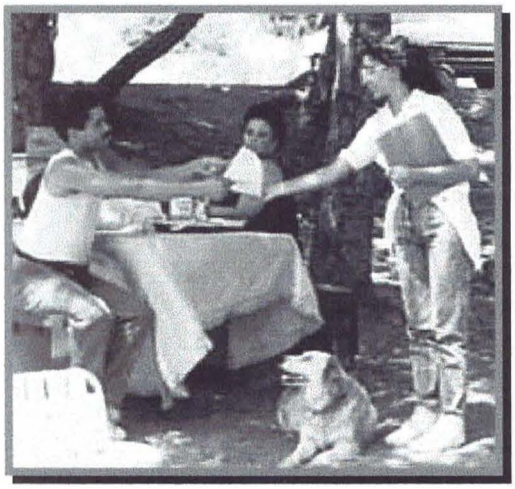
Adaptive Management at the Falls Picnic Area: Pre-Renovation Survey Research



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Background

The following reports results from a visitor contact survey conducted at the Falls Picnic Area in summer 2001. The picnic area is scheduled for renovation in the near future and the survey provides visitor input into the renovation plans.

The picnic area is located off State Highway 38 in southern California, and is managed by the Frontcountry Ranger District of the San Bernardino National Forest. The Falls Picnic Area, originally designed as a campground, opened to the public in the late 1940s, early 1950s. Since it was designed as a campground, the picnic sites are spaced well away from each other. There are 22 "camp" units in the picnic area and 40 parking slots. In recent years replacement vault toilets were installed at various places throughout the area. Near the picnic area entrance is a parking area for Falls, which has access to the Momyer Trailhead, and at the end of the picnic area is the Vivian Trailhead also with nearby parking. Proximate to the picnic area is Mill Creek.

In addition to picnic area renovation, there are several issues that area managers describe as central to management at Falls. These include bear management (bear proof trash cans, the animals are a threat to visitors but are also attractive to visitors, and local resident concerns), flooding, traffic problems (during summer months and for snow play in the winter), and control of visiting minors (alcohol, graffiti and vandalism are issues). According to the picnic area managers, most use at Falls is by Hispanic/Latino visitors (estimated at 75%), followed by Asian/Pacific Islanders (estimated at 18%), Whites (estimated at 5%) and African Americans (estimated at 2%). They also estimate that visitors recreate in groups of up to 20 people.

The survey instrument, developed in consultation with the Frontcountry Ranger District, was constructed in anticipation of renovation of the picnic area. The instrument asked some specific questions about development at the picnic area and addressed issues suggested by area managers. Since replacement vault toilets were recently installed at various places throughout the picnic area, visitors were not asked specifically about toilets.

The study addressed visitor desires related to the renovation. It is anticipated that follow-up research will examine visitor reactions to picnic area renovations after they are complete, with other follow-up studies to be conducted later. Falls Picnic Area, then, is an area of adaptive management (Chavez, in press) with decision-making based upon continuous input from the San Bernardino National Forest, the Pacific Southwest Research Station, and visitors.

Methods

Dates of data collection were randomly selected throughout the summer months 2001. Data were collected from 249 recreationists at the picnic area on 10 weekend days throughout the summer from June 23 to September 23. Half the data collection days were Saturdays and half were Sundays. The survey instrument was available in English and Spanish. Bilingual teams from California State University at San Bernardino collected data under a cooperative agreement with the Pacific Southwest Research Station.

All visitors to the picnic area (age 18 and over) were asked for their voluntary participation in the survey. Visitors were assured confidentiality of their responses. Response rate was 67%. The most typical reasons for not participating in the research process were: picnickers were too busy cooking or eating, people didn't speak English or Spanish, hikers were in a hurry to begin hiking, hikers didn't consider themselves users of the picnic area.

Items in the survey were developed to acquire visitor preferences about picnic area renovations in general and to query visitors about some specific changes for the area. Additional questions in the instrument were designed to describe visitor recreation patterns and activities as well as provide socio-demographic information about area visitors.

Results

What follows are the results from the survey. Most results are in percentages though some averages, or means, are also provided where appropriate. Statistics are reported for all 249 respondents unless noted otherwise. Differences between Whites (n = 74) and Hispanics (n = 111), between first-time (n = 107) and repeat visitors (n = 142), and between those who would make changes to the area (n = 95) and those who would not (n = 142) are discussed. Perceived levels of crowding at the area were also examined. Levels were measured on a scale including not-at-all crowded (n = 54), slightly crowded (n = 76), neither (n = 23), moderately crowded (n = 71), and extremely crowded (n = 15).

Socio-demographic Characteristics

Slightly more males (51%) than females (47%) responded to the survey. The average respondent was 34.3 years old. Ages ranged from 18 to 74 years (SD=11.3). Hispanic respondents tended to be younger (mean=32.4) than White respondents (mean=36.3) (t (173)=2.26, p=0.025). Nearly half of all respondents attended or graduated from college (49%). Another 38% attended or graduated from high school. Hispanics, on average, fell just short of completing high school (mean=11.7) compared to Whites who averaged two years of education beyond high school (mean=14.4) (t (179)=6.18, p=0.000). The majority of respondents were either Hispanic (45%) or White (30%) (see Fig. 1).

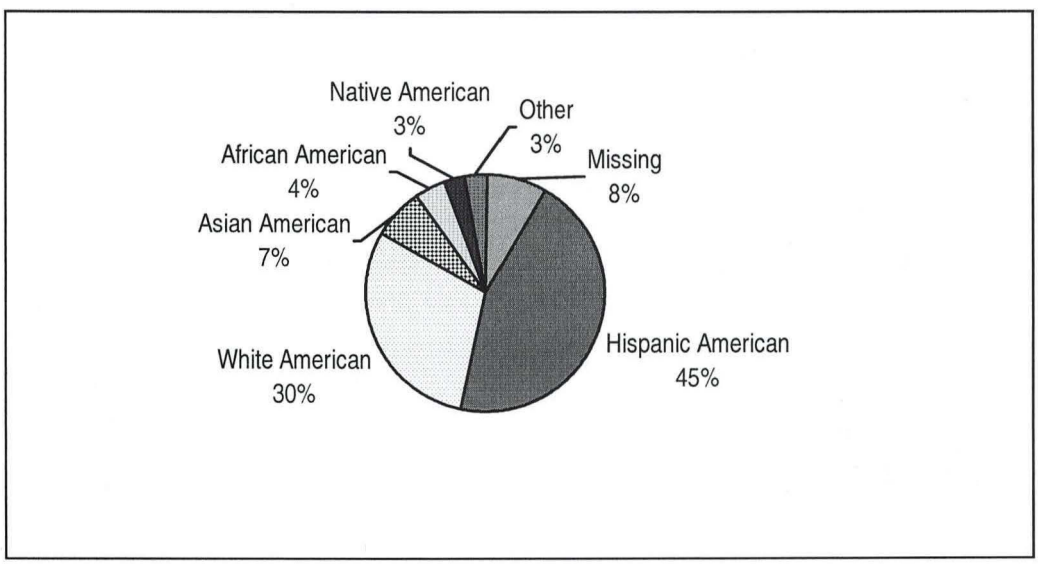


Figure 1. Cultural group respondent prefers to have others think of them as

Over half of respondents said they speak English most of the time (56%). Three in 10 (29%) said they speak Spanish most of the time. Others speak Korean (2%) or Arabic (1%). A majority (68.5%) of Hispanics said they speak Spanish most of the time. Nearly all (98.6%) of Whites said they speak English most of the time (p=0.000). Similarly, six in 10 respondents said they read English most of the time (60%). Three in 10 respondents (28%) read Spanish most of the time. Others read Korean (1%) or Arabic (1%). A majority (62.6%) of Hispanics said they read Spanish most of the time. Nearly all (98.6%) of Whites said they read English most of the time (p=0.000).

Six in ten respondents were born in the United States (59%); 4 in 10 were native Californians (38%). About one-third of respondents were born in Mexico (29%), Central (2%) and South America (1%) combined. Almost 6% were born in other countries. A majority (62.9%) of Hispanics said they were born in Mexico, Central or South America (p=0.000). Respondents have resided in the US for an average 26.8 years (SD=14.2).

Income is varied (see Fig. 2). Many respondents reported their annual household income to be $35,000 or less. The number of people per household ranged from 1 to 17 (SD= 2.4). The average number of people per household was 4. A majority (57.1%) of Hispanics reported annual household incomes under $35,000 compared to only 14.3% of Whites (p=0.000). A majority (60.3%) of Hispanics reported households of five or more persons compared to 22.6% of Whites (p=0.000).

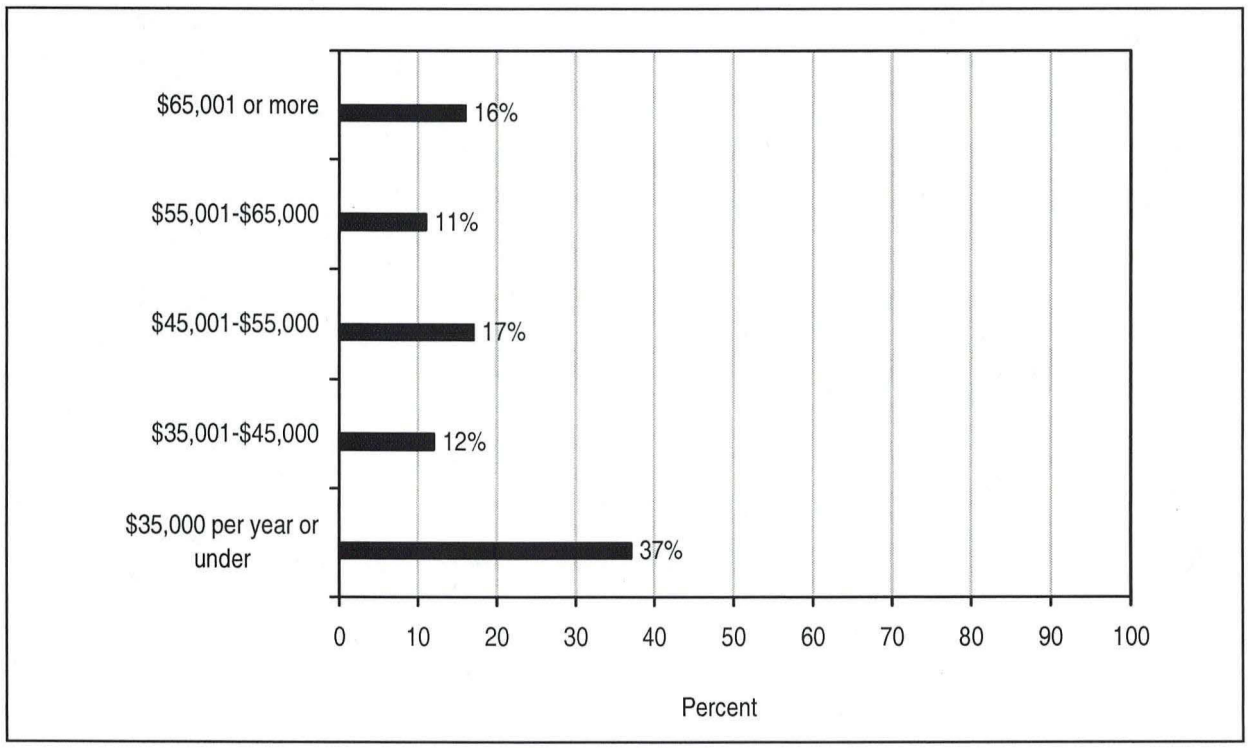


Figure 2. Annual household income

Visitation Patterns

About 6 in 10 visitors to the picnic area were repeat visitors (57%). Those who were repeat visitors had visited the area an average 8.4 years (SD=7.6) and visited an

average 3.3 times in the past year (SD=3.1). Hispanics were almost evenly split between first-time (49%) and repeat (51%) visitors. Only 31% of Whites were first-time visitors (p=0.018).

Respondents were asked how long they planned to stay at the picnic area the day contacted. About one-quarter of the visitors planned to stay all day at the area (26%). Another quarter planned to stay from four to six hours (24%). Thus visitors plan full-day outings at Falls, not quick picnics (only 7% planned to stay less than two hours). More Hispanics (35%) than Whites (16%) said they planned to stay all day (p=0.007). Repeat visitors were more likely to stay longer at the picnic area (p=0.000).

Picnic Area Features

Respondents were asked which features they liked most about the picnic area. The most-liked features included the creek (82%), the trees (75%), the rocks/boulders (63%), and the picnic tables (56%). Less than half said they most liked the wildlife (47%), nearby hiking trails (43%), and the barbecue pits (33%). Fewer still, liked the restrooms (17%).

Activities

The most frequently named respondent activities at the picnic area were picnicking, relaxation, and hiking (see Fig. 3). Additional activities were playing in the creek, visiting with others, and wading in the creek. "Other" responses (n=16) were categorized as religion, snow, and food. Repeat visitors were more likely to hike (p=0.000) and more likely to relax at the site (p=0.009).

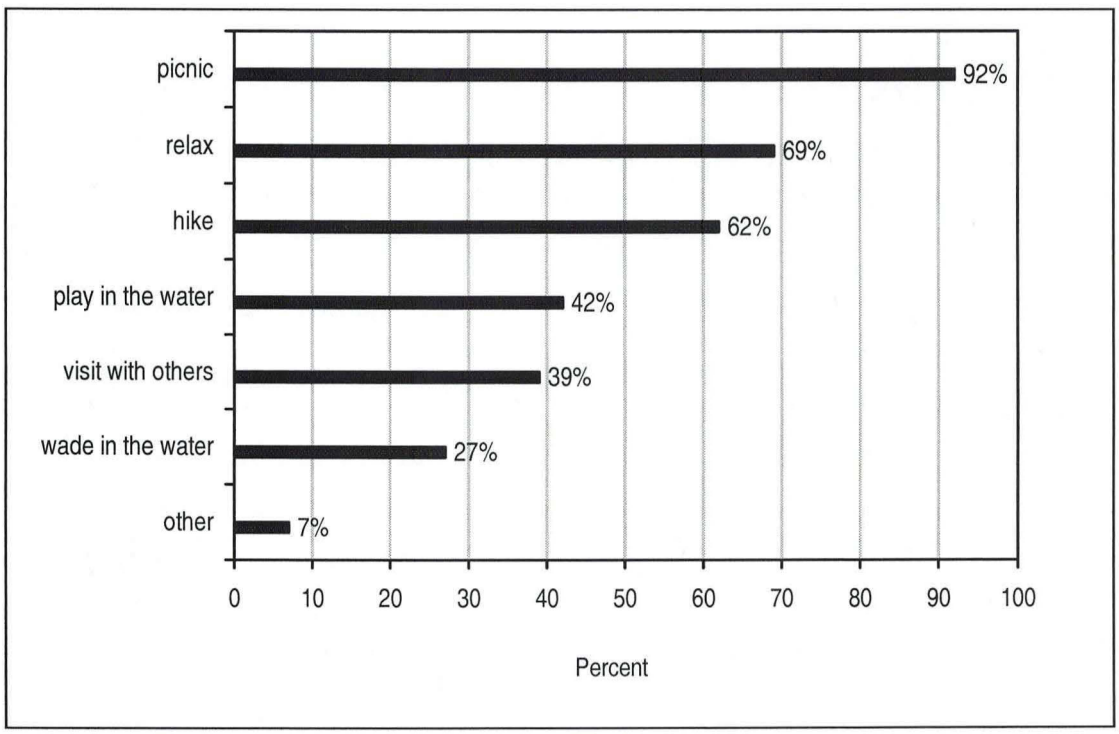


Figure 3. Activities usually engaged in at the picnic area (checked all that apply)

The favorite activity at Falls was picnicking, mentioned by more than one-third of the respondents (see Fig. 4), followed by relaxation and hiking. Almost one-quarter gave multiple responses to this question though they were asked to choose one response.

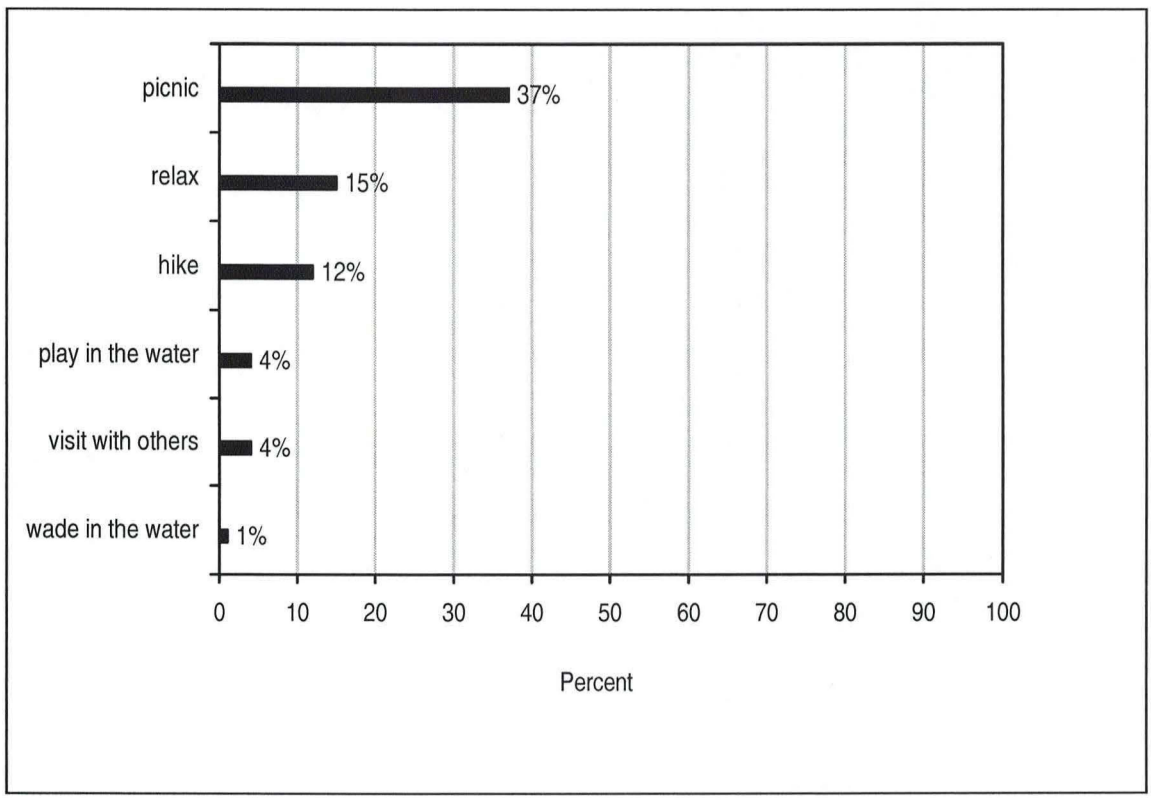


Figure 4. Favorite activity at Falls (checked all that apply)

Picnic Preferences

Respondents were asked their favorite place to picnic at the Falls Picnic Area. Over three in ten respondents said their favorite place to picnic was in a designated picnic site (38%) while another one-quarter said their favorite place to picnic was near the water (26%). Others said they had no preference (18%), or they preferred rocky areas (6%) or

picnicking by the falls (1%). Another 8% gave multiple responses though we requested them to make a choice.

About 6 in 10 (59%) of the visitors reported they were able to picnic at their favorite place most (28%) or all of the time (31%). Another 21% said they were able to picnic at their favorite place some of the time. As perceived crowding increased, the ability to picnic at their favorite place all or most of the time decreased (p=0.000).

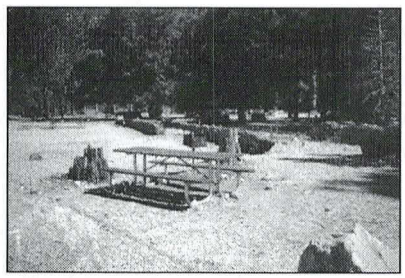
Picnic Area Changes

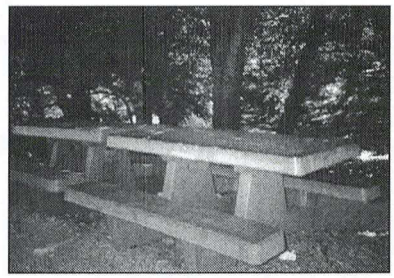
Respondents were asked if they would change anything about the Falls Picnic Area. Importantly, almost 6 in 10 respondents said they would *not* change anything at the picnic area (57%). Those who would make changes (38%; n=90) suggest changes be made to the picnic facilities (38%), the restrooms (22%), parking (19%), the Adventure Pass (7%), cleanliness (4%), allow camping (2%), natural resources (2%), and "other" areas (6%). Note that even though 57% said they would make no changes, almost all went on to respond to other specific picnic area change questions—particularly suggesting changes to be made in the number of picnic sites and parking slots. The majority (71%) of first-time visitors said they would not change anything, while repeat visitors were more evenly split on change (p=0.001). As perceived crowding increased, the proportion of those who said they would make picnic area changes increased (p=0.000).

Respondents were asked what size picnic tables they prefer. Respondents said they prefer tables that are 10 feet long and seat eight people (48%). About one-third

preferred 8 foot tables that seat six people (34%). More than one-quarter (29%) of the respondents desire side-by-side tables for large groups.

Respondents were shown two photographs of tables and were asked which they prefer for the Falls Picnic Area. Respondents report a preference for concrete tables (see Fig. 5).





33.3%	63.9	2.8%
Wood	Concrete	no response

Figure 5. Type of table preferred at Falls Picnic Area

Respondents were asked how far apart they would prefer other groups and their tables to be from the respondent. Most respondents prefer other groups and their tables to be about 30 feet away from their group (see Fig. 6). Compared to Hispanics, White respondents preferred greater distances between themselves and other groups of visitors (p=0.001).

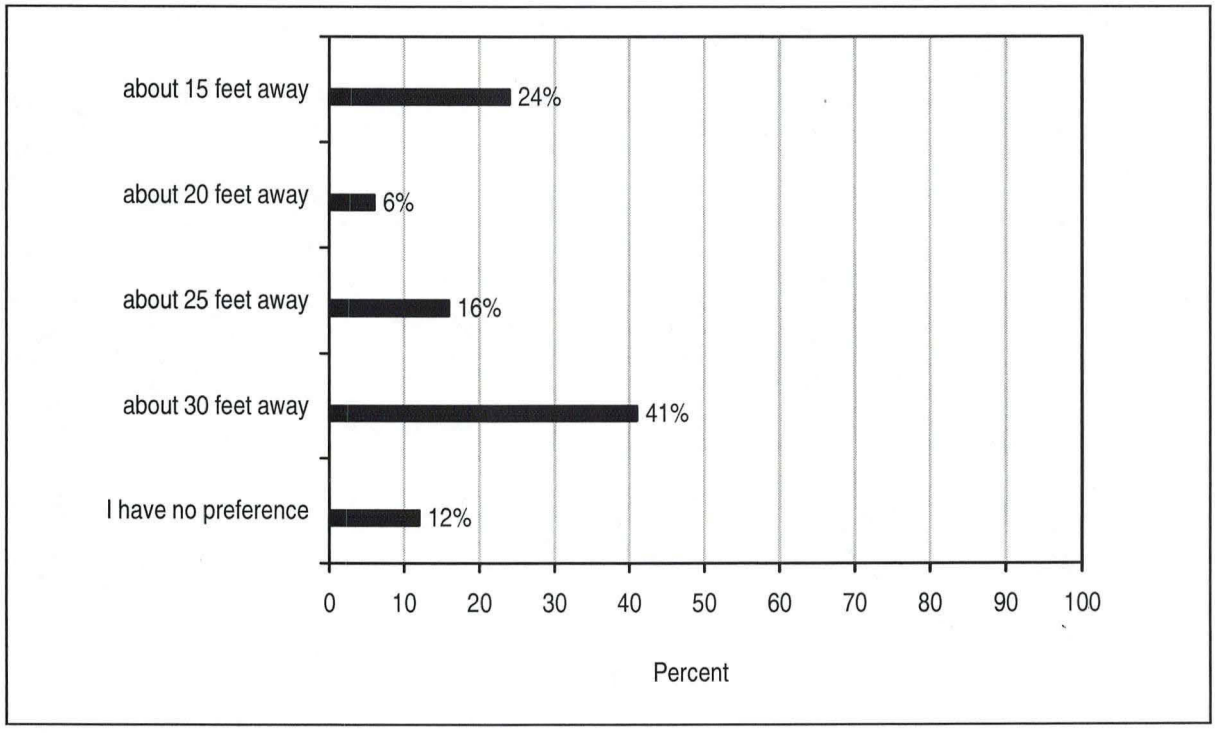


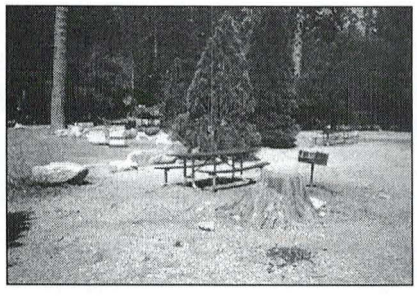
Figure 6. Distance respondents prefer other groups and their tables to be

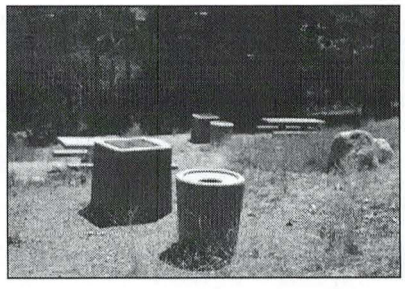
Respondents were asked if there were enough picnic tables at the area. Slightly more than half of respondents said there are currently enough picnic tables (53%), though 46% said there were not enough picnic tables. First-time visitors were more likely to say there were enough picnic tables (p=0.001). Most respondents wanting changes at the picnic area said there were not enough picnic tables (71%; p=0.000). As perception of

crowding increased, the proportion of those who said there were not enough picnic tables increased (p=0.000).

Respondents were asked if there were enough barbeque grills. Slightly more than half of respondents said there are currently enough barbeque grills (51%), though 47% said there were not enough barbecue grills at the picnic area. Most respondents wanting change at the picnic area said there were not enough barbeque grills (70%; p=0.000). As perception of crowding increased, the proportion of those who said there were not enough barbeque grills increased (p=0.000).

Respondents were asked what kind of construction materials they prefer. Most respondents said they preferred concrete construction materials to natural ones (see Fig. 7).





41.8%
Natural

57.0%
Concrete

1.2%
no response

Figure 7. Preference for natural or concrete construction materials

Respondents were asked if they would like to retain the current parking lot configuration or would prefer the one pictured in Figure 8. Nearly 7 out of 10 respondents said they would retain the current parking lot configuration (67%), which features individual parking slots.

66.7% retain parking slots like the ones currently here
30.5% change to the parking lot pictured
2.8% no response

Figure 8. Parking lot preference

Respondents were asked if there were other improvements they would like to see at the Falls Picnic Area. About 6 in 10 respondents said they had no other improvements to suggest (61%). Over one-third of the respondents had suggested changes (35%; n=81). The most frequently suggested changes were improvements to restrooms (37%), picnic facilities (36%), parking (17%), Adventure Pass (4%), and cleanliness (3%).

There are currently 22 picnic sites available at the Falls Picnic Area. Respondents were asked if they would keep the number of picnic sites the same, almost double it, or almost triple it. Though most respondents (45%) would almost double the number of picnic sites, another 41% would keep it the same size. Another 13% would triple the

number of sites. More Hispanics (21%) than Whites (7%) favored tripling the number of picnic sites (p=0.031). Repeat visitors were more likely to want to double the number of picnic sites (p=0.018).

Currently there are about 22 parking slots available near the existing sites plus another 20 or so at the entrance to the picnic area. Respondents were asked if they would keep the parking the same, almost double it to 80 or almost triple it to 120. Though 43% said to keep it the same size, 41% would prefer to almost double parking, and 16% would prefer to almost triple parking. More Hispanics (23%) than Whites (7%) preferred tripling the number of parking slots (p=0.010).

Information Preferences

Currently there are a few bulletin boards where some information is available in English and Spanish. There is some room in this area for interpretive displays. Respondents were asked what types of information they would like to receive (see Fig. 9). Over half of respondents said they wanted to receive information about other picnic areas. An equal number said they wanted information about bears. Nearly half said they wanted information on camping areas and trees and plants. About one-third of respondents wanted information about squirrels and birds, and about area history. Another 12% had "other" suggestions (n=23) including natural features (35%), trails (26%), Adventure Pass (13%), and maps (8%).

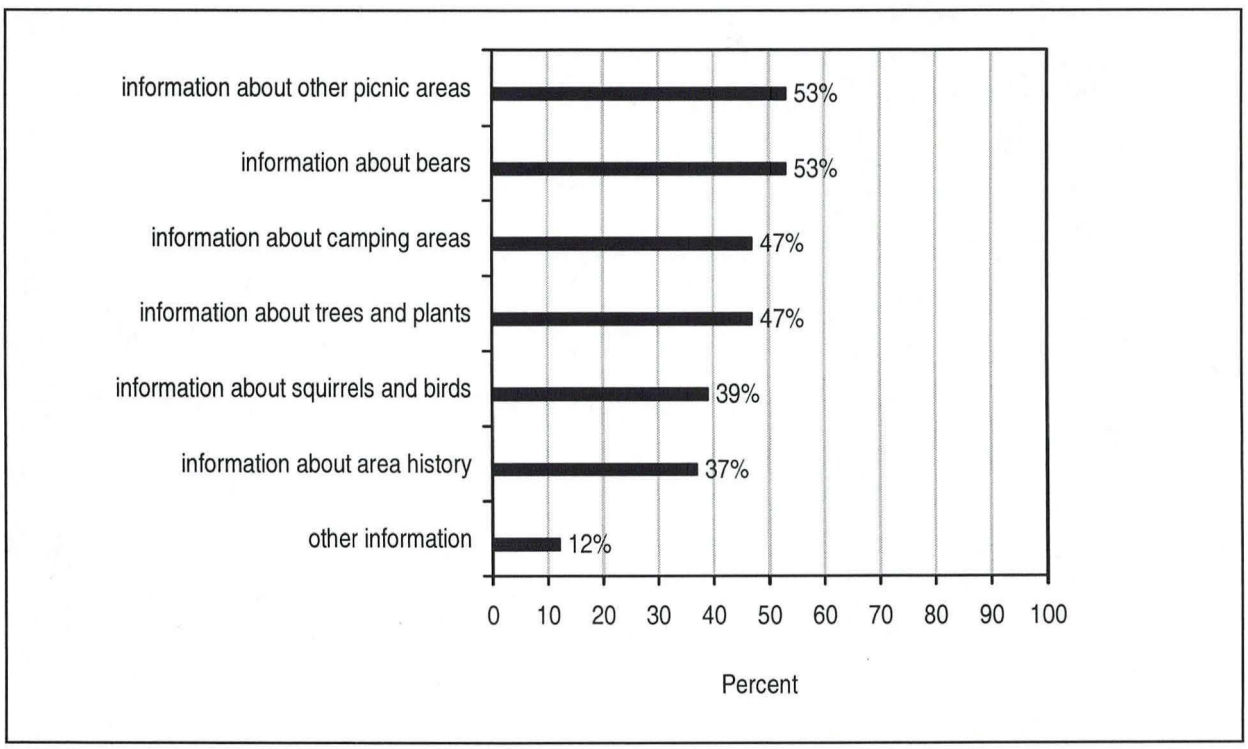


Figure 9. Types of information respondents would you like to receive (checked all that apply)

Fees

Respondents were asked how much they would pay for parking at the Falls Picnic Area if there were a charge for the picnic area beyond the Adventure Pass ($5 per day). Three quarters of respondents said they would pay nothing more beyond the Adventure Pass ($5 per day) to park at the picnic area (see Fig. 10), though 15% said they would pay another $1 per day. Majorities in all income groups said they would pay nothing in excess of the Adventure Pass (p=0.001).

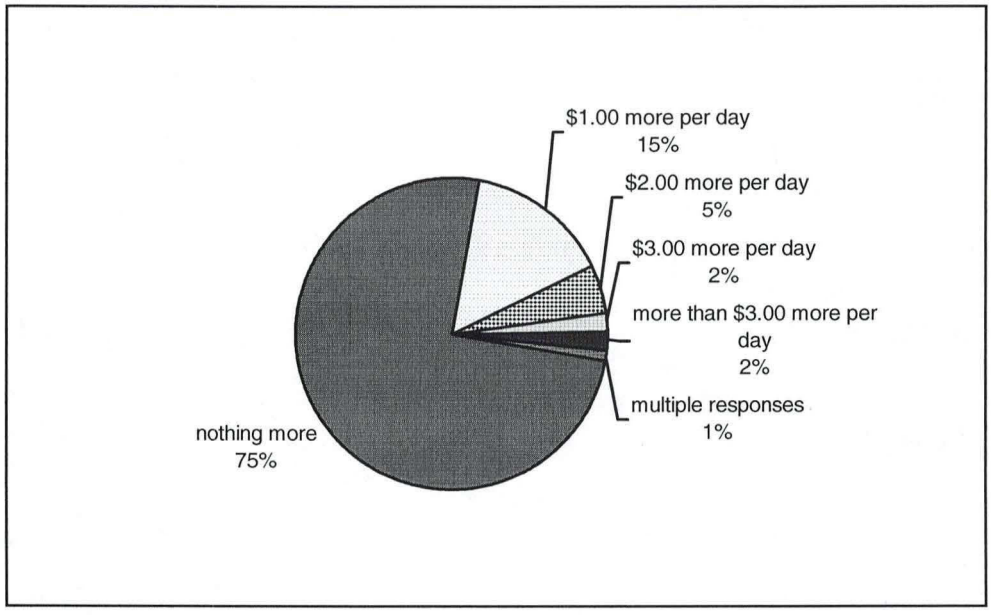


Figure 10. Parking charge beyond the Adventure Pass ($5 per day)

Picnic Area Use Level

Respondents were asked how many people were in the group they were recreating with. The average respondent group was made up of seven adults (defined as age 16 and older; number of adults ranged from 1 to 80, SD=9.3) and four children (defined as age 15 and younger; number of children ranged from 0 to 50, SD=5.6). Hispanic groups

tended to be larger with an average of nine adults (mean=8.9; t(156)=-3.06, p=0.003) and five children (mean=5.3; t(183)=-3.06, p=0.003). White groups averaged five adults (mean=4.8; t(156)=-3.06; p=0.003) and three children (mean=2.8; t(183)=-3.06, p=0.003).

Respondents were asked to rate their perceptions of picnic area use level (see Fig. 11). Just over one-quarter rated the area as moderately crowded, though another 50 percent said that the area was slightly or not at all crowded.

Not at all Crowded	Slightly Crowded	Neither	Moderately Crowded	Extremely Crowded	No Response
1	2	3	4	5	
21.7%	**30.5%**	**9.2%**	**28.5%**	**6.0%**	**4.0%**

Figure 11. Picnic area use level perception

Respondents were asked if they had enough space for their activities at the Falls Picnic Area. Eight in 10 respondents said they have enough space for their activities (80%). Most of those who indicated a lack of space (19%; n=21) said they wanted more room for picnicking/eating (48%) and sports (19%).

At the end of the survey instrument, respondents were asked if they had additional comments. Most respondents offered no further comment. Of those who did, 1 in 10 suggested an improvement in facilities. Others said complimentary things such as their thanks and commenting on what a nice place the Falls Picnic Area is. Full comments are in Appendix A.

Conclusions

This study was conducted in anticipation of the renovation of the Falls Picnic Area. Study objectives, as determined in consultation with picnic area managers, included gathering information from visitors about their preferences for picnic area renovations in general and their desires for specific picnic area changes. Data concerning visitor recreation patterns and activities and socio-demographic characteristics were also collected.

About half of the Falls summer survey respondents were Hispanic, another one-third were White. The average respondent group consisted of eleven people, although Hispanic groups were larger. Respondents averaged 34 years of age with Hispanic respondents younger on average than their White counterparts. Respondents were moderately well educated, Whites more so than Hispanics.

Visitors tended to stay at the picnic area for extended periods of time, mostly picnicking, relaxing, and hiking. They most enjoyed the creek, trees, and rocks/boulders at the picnic area. Many are repeat visitors to the picnic area, with a history of several years of visitation. Visitors preferred to picnic in designated sites or near water and were able to do so all or most of the time.

When asked a general question about picnic area changes, most respondents said they would not make any changes to the picnic area. Regardless, many of these respondents answered specific picnic area change questions about the number of picnic sites and parking slots.

Survey respondents preferred concrete materials to wood. They preferred tables 10 feet in length in sites 30 feet apart, although Hispanic visitors tended to prefer sites closer together. There is some support for side-by-side tables. Many respondents want more barbecues, more picnic sites, and more parking spaces (the existing parking lot configuration was preferred).

Respondents were generally in favor of receiving a variety of information. When visitors were asked to select the types of information they would like to receive, they most frequently selected information about other picnic areas and information about bears. Bear management was also identified by picnic area managers as central to management, suggesting an opportunity to disseminate information to a receptive public. Messages in both English and Spanish would seem to be appropriate for the nearly one-third of respondents who speak and read Spanish most of the time.

The imposition of fees in addition to the Adventure Pass would be viewed unfavorably, regardless of annual household income level. There is slight support for an additional $1 add-on.

Importantly, many picnic area visitors were Hispanic and they expressed preferences for more picnic sites and more parking spaces. Additionally, most picnic area visitors were repeat visitors and they suggested more picnic tables and more picnic sites. Taken together, these results suggest support for several picnic area changes.

Interestingly, though the restroom facilities were not addressed directly in the survey instrument, many respondents mentioned restrooms in response to other questions (picnic area change suggestions question, other improvements question, and in the additional comments section). This suggests the importance of these facilities to respondents. Many comments were directed to the cleanliness of these facilities as well as the desire for separate facilities for men, women, even children.

References

Chavez, D.J. In press. Adaptive management in outdoor recreation: Serving Hispanics in southern California. Western Journal of Applied Forestry. (Due to be published July 2, 2002.)

Appendix A. Additional Comments

Thanks for your attention.

Si It is a blessing for humanity to have this God created place Jn 3:16

May peace and blessing of Jesus be with you and may all that you do be for the love of God.

Thanks for taking our opinions, God bless you.

Congratulations for your work and protecting nature, cleaning and at the same time keeping it modern.

Thank you.

No. Have a good day.

It is beautiful in Gods creation.

our prayers for America.

More parking, more tables near the tables

To put joined tables so that we could have conversations with other people

More parking/more grills

For the place to be better

Yes, I think that you should have cable cars to attract more tourism.

We enjoy the natural setting and solitude of visiting. The bathroom is in a perfect spot. A play area for children would be nice.

Clean the restrooms.

restrooms

There needs to be more air flow in the bathrooms.

There is no water.

Fix the bathrooms; more service to bathrooms.

Yes, I would like a change in the bathrooms. That's the only thing I don't like.

To have different ways to come up here, especially for kids and older people.

Make the hill easier for kids and older people so that they can enjoy the landscape.

Have individual restooms--Male—Female

Try to separate picnic sites & parking as much as possible to give the "feel" of less crowded then (than) it actually is, and today it is crowded.

Need better bathrooms.

change bathrooms, please

Nice girls, cleaner bathrooms

Less rocks around the tables.

Because it is very quiet, very pretty and relaxing.

Please don't expand too much, or allow too many people to use the facilities and ruin the natural environment.

I like to go hiking, play in the river, well I like everything.

We have visited Forest Falls for many years as a couple and now we enjoy it as a family. I would not like to see too many changes. It is great the way it is!

peaceful

Visiting with local children and children from Texas (reunion).

It's Saturday--time for R&R.

I love this place. Thank you!

It's valuable (precious).

Well, so far--so good.

Ad pass where?

Put parking dispensers near parking lot.

Not having to pay to park.

no charge, signs in Spanish about parking and passes